

Working Paper on

Quantifying the Benefits
of Changing the Way
Organizations Reward,
Organize and Manage People

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CHAPTER 1

INTRODUCTION

. . . if the human resource management system in the Department of Defense generated even half of the beneficial effects . . . evaluated in a recent study, . . . [it] could result in a 15 percent increase in productivity . . .

The discussion in the “Working Paper on Accounting for the Value of People: A Necessary Step in Implementing Strategic Human Resource Management” suggests how the department might approach the task of budgeting for human resources in a way that better captures, first, the value of those resources to the organization and, second, the benefit of alternative policies and practices that influence the value of people. The costs of alternative policies and practices are, if not trivial to calculate, much easier to calculate than the costs of benefits. As noted, the costs generally occur in the time frame in which the policies and practices are changed, while the benefits are not only often intangible but occur following, often by lengthy periods, the costs. This working paper describes how other organizations have captured the benefits of changes to human resource management policies and practices.

This perspective is important because the data that exist strongly suggest that strategic human resource management can make a substantial difference in organizational performance. In organizations that have been studied, significant improvements were observed in such broad-based measures as profit, market value, and market share, as well as in other, more limited – but equally important – measures, such as turnover, absenteeism and productivity. Although not all of these measures of performance are directly relevant to the department, these studies can serve to indicate the potential benefits of employing a strategic approach to human resource management – something quantifiable to offset the cost of change.

As outlined in greater detail below, if the human resource management system in the Department of Defense generated even half of the beneficial effects associated with the type of changes evaluated in a recent study of innovative private sector organizations – and assuming these changes were applicable to a total of 500,000 people and individuals cost \$40,000 on average – these different policies and practices could result in a 15 percent increase in productivity; as a result, the workforce could be reduced by 75,000 for a total savings of \$15 billion over a period of five years and still maintain the same level of output.

To apply the benefits of strategic human resource management in the context of a new way of budgeting for human resources, the department will have to develop and quantify measures more suitable to its environment and mission. This paper provides a framework and some specific data to begin that journey.

CHAPTER 2

A TAXONOMY

In order to organize the available data from a sampling of the research available, the 8th Quadrennial Review of Military Compensation developed a two dimensional taxonomy, seen in Figure 1.

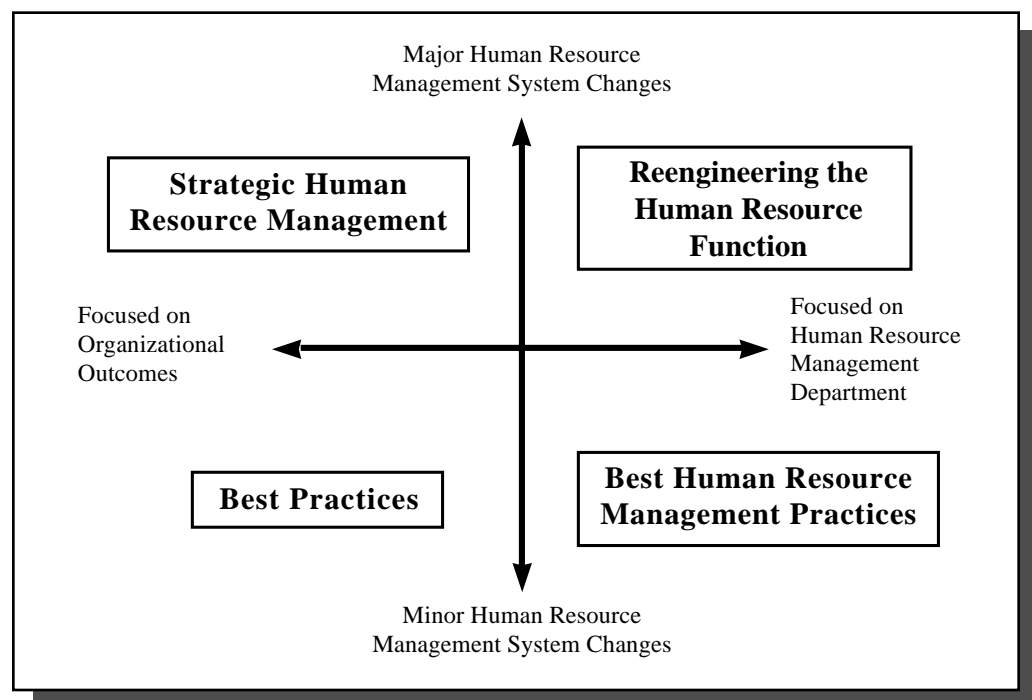


Figure 1 – Framework to Organize Data

The vertical axis denotes the range over which the magnitude of the change varies: whether the change to the human resource management policies and practices being studied was major – a change to the entire system or multiple integrated practices relatively simultaneously – or minor – a change to or examination of a single human resource management policy or practice.

The horizontal axis denotes where the effects of the change are realized. The effectiveness of the practice being examined could be measured in terms of the organization's outcomes or it could be measured as improving a human resource management function output (an improvement in internal human resource management department processes).

A description of the type of information resulting from studies within each quadrant follows:

- Strategic human resource management – The studies in this quadrant produce evidence linking employment of strategic human resource management or a major human resource management system change (multiple policy and practice changes) to organizational outcomes. A statement such as “Company X aligned and redesigned its human resource management system and productivity increased by 13.5 percent, profits rose 4.75 percent per year, etc.” would be typical in studies in this quadrant. Although primarily affecting the human resource management function, some studies of changes in the policies and practices to support a major shift in the direction of that function fall into this quadrant because of their impact on the organization as a whole. Another category focuses on the policies and practices needed to support new roles that the human resource management department might take on in the future; such roles might include strategic partner and the center of excellence for outsourcing (human resource management activities as well as all other kinds of activities).
- Reengineering the human resource management department – The studies in this quadrant produce information about the effect of employing strategic human resource management or a major human resource management system change (multiple policy and practice changes) on the human resource management department. The number of studies in this category is small because changes of this magnitude are generally employed across the entire organization with the aim of improving overall company performance. Taking a leadership role, the human resource management function could choose to employ strategic human resource management to itself in order to demonstrate the efficacy of such an approach, in effect becoming a de facto pilot study. Because the uniformed services are so large, pilot studies of this nature would be prudent before undertaking a major restructuring of the human resource management system – and the human resource management function would be an ideal candidate.¹
- Best practices – The studies in this quadrant generally examine one human resource management practice (or a limited set of related practices) and the correlation between it and organizational outcomes. A statement such as “changing to a team environment (one practice) increased organizational productivity by 20.2 percent” would be typical in studies in this quadrant. Although studies in this quadrant can support the claim that human resource policies and practices can improve organizational outcomes, the magnitude of the effects can be misleading for several reasons. First, if only one part of the human resource management system was changed (that which is being observed), the rest of the system could continue to send messages that are counter to the desired effect of the intervention. In this case, the potential effects of the intervention may be significantly understated. Second, several

¹ Favoring the selection of the human resource management department as a pilot program would be its organizational independence since several services have major, somewhat autonomous commands (such as a personnel command, a recruiting command, and/or a training command). In addition, presumably, it would also have a more informed and positive attitude toward the change.

We are most interested in data showing how human resource management system redesign impacts organizational results . . .

changes might have been made in the human resource management system (as well as in other processes and systems), but other than the policy or practice of interest, these might go unreported. Although the impact might be high in the organization studied, when only the policy or practice of interest is implemented in another organization, the reported effects may appear overstated. Finally, practices are neither good nor bad, effective or ineffective, useful or a hindrance in and of themselves. They can only be characterized in terms of how well they help an organization achieve its strategy in the environment it faces with the resources it possesses, etc. If the practices are applied in different circumstances, they may not be “best” in any sense of the word.

- Best human resource management practices – The studies in this quadrant are the least generalizable. Fortunately, they are also the least interesting. They deal with single or limited sets of policies and practices specifically directed to improving the efficiency or effectiveness of the human resource management function in terms, perhaps, of better ways of carrying out the staffing, rewarding, training, etc. These policies and practices would be tailored to the specific function of human resource management. A statement such as “a cross-functional team of human resource management specialists increased satisfaction indices of line managers they served by 17.3 percent” would be typical in studies in this part of the quadrant. The cause and effect link is much tighter for studies included in this quadrant, but the overall benefit to the organization tends to be small as the human resource management department itself is typically a small portion of any organization. However, some improvements in human resource management policies and practices do permeate into the rest of the organization (particularly, perhaps, other functional areas).

We are *most* interested in data showing how human resource management system redesign impacts organizational results (strategic human resource management). Though data from the other quadrants, particularly best practices, is generally more available and also very useful.

Information from reengineering and process improvement in the human resource management department are less useful, because the effect of any improvement (even some major improvements) in the human resource management department would have a small effect on the organization as a whole simply because typically in most organizations only a small fraction of the organization’s resources are allocated to the human resource management department. Some improvements, however, such as ability to quickly fill positions can translate into positive impacts on building the organization’s competencies and capabilities.

The data presented fall primarily in the strategic human resource management and best practice quadrants because we focused on research that dealt with organizational outcomes. Though we present limited data for the reengineering and best human resource management practices quadrants, more exists and could be very beneficial to an human resource management department wishing to re-engineer its processes.

CHAPTER 3

SOME CAVEATS

. . . multiple studies all point to the same or similar conclusions – that a relationship exists between human resource management policies and practices and desirable organizational outcomes.

Many large-scale analyses, individual case studies and anecdotal reports have examined the impact of human resource management policies and practices on organizational outcomes. Though the research is formal, it is done in actual organizations; therefore, the studies lack the normal scientific rigor derived from controlling intervening or exogenous variables.² However, multiple studies all point to the same or similar conclusions – that a relationship exists between human resource management policies and practices and desirable organizational outcomes. Therefore, what is lacking in scientific rigor is, to some extent, overcome by the volume of studies with similar conclusions. An article comparing the results of 16 formal econometric studies on profit sharing versus productivity expressed the strength of the evidence this way: “It is fair to say that no one study yielded convincing evidence on the relation between profit sharing and productivity. However, the similar conclusions that emerge from all 16 studies taken together provide fairly strong evidence of a consistent pattern.”³

The studies, at best, suggest a correlation between human resource management policies and practices and organizational outcomes. Even when limited to examining one policy or practice or one change in policies and practices (often referred to as “Best Practices”), these studies can not explain why particular results occur, only that a human resource management policy or practice and a particular organizational outcome tend to occur together. It can not say if the organizational outcome is the result of the human resource management policy or if the policy developed because the organization habitually exhibits that outcome.⁴ These studies often appear to carry more statistical significance, but again, the lack of an experimental design that controls for the direction of cause and effect leaves the conclusion more tenuous than desired.

In assessing the impact of the changes described in the studies below, it should be kept prominently in mind that some practices may work better under certain strategies than others. The taxonomy does not capture the strategy underlying the selection of the practices described. Any practice or set of practices that has been seen to improve organizations should not be adopted by another organization without

² In other words, if an organization changes four human resource management practices and has increased profits, can you prove that the four changes “caused” the increased profits? Or, was it one of the four changes? Or, was it an increased demand by consumers, so the entire industry benefited? Etc.

³ Martin L. Weitzman and Douglas L. Kruse, “Profit Sharing and Productivity,” in *Paying for Productivity: A Look at the Evidence*, Alan S. Blinder, ed. (Washington, DC: Brookings Institution, 1990), p. 127.

⁴ For example, a study may show that profitable companies often have a profit sharing plan. Was the plan instituted because they were profitable or are they profitable (or more profitable) because they have a motivating human resource management practice?

considering its own environment, goals and strategy (alignment). Potentially, strategy needs to be added as another dimension.⁵ Benchmarking is useful in deciding how to implement a practice in a particular organization; it is less useful in deciding what practice to implement.

Second, policies and practices interact with and influence each other – whether these relationships were specifically investigated or not. If only one policy or practice is described by a source, the observer can not be sure that the organization employing that policy or practice did not alter other related (and unrelated) policies and practices, as well.

⁵ Note: many “best practices” types of studies may not explicitly consider strategy within the analysis. They implicitly believe that certain practices are “good” under all circumstances. Our beliefs are consistent with the contingency school of thought – that practices in themselves are neither “good nor bad” but only become good or bad depending on how well they align with the organization’s strategy and other human resource management practices.

CHAPTER 4

THE EVIDENCE

Strategically and properly applied, the human resource management system can greatly improve an organization's performance.

The information gathered from over three dozen sources is organized and discussed according to the above taxonomy. Together this information builds a strong case for the conclusion that human resource management policies and practices effect desired organizational results. Strategically and properly applied, the human resource management system can greatly improve an organization's performance. Keeping in mind that an organization should align its human resource management system with its organizational strategies and that each organization is different (different levels of efficiencies already attained; different environment; mission, etc.), applying one new practice is not guaranteed to obtain the same results the organizations described below obtained. These data, however, do provide an estimate of the potential magnitude of improvements.

Strategic Human Resource Management

Several studies have attempted to identify the impact of applying strategic human resource management or making major changes to a human resource management system on various measures of organizational performance.

The results are summarized below.

- A 1993 study of over 700 publicly held firms found that the top 25 percent of firms – those having the largest number of best human resource management policies and practices – had an annual shareholder return of 9.4 percent versus 6.5 percent for firms in the bottom 25 percent. Firms in the top 25 percent had an 11.3 percent gross rate of return on capital, more than twice as high as that of the remaining firms.⁶
- A 1995 study of 968 large and medium-sized firms in thirty-five U.S. industries found that a one standard deviation increase in the deployment of high performance work practices reduced turnover by 7 percent and increased sales per employee by more than \$27,000 per year. It also found that a one standard deviation improvement in the use of high performance work practices enhanced profitability by more than \$4,000 per employee

⁶ Mark A. Huselid, "Human Resource Management Practices and Firm Performance," Working Paper, Institute of Management and Labor Relations (New Brunswick, NJ: Rutgers University, 1993); cited in The Hay Group, "Research on the Effects of Changing the Way People are Managed," report prepared for the 8th QRMC, February 5, 1997.

and increased market value by more than \$18,000 per employee, and it related these improvements to the influence of these work practices on turnover and productivity.⁷

- Another study⁸ focused on the five companies whose common stocks had the highest returns between 1972 and 1992: Southwest Airlines (21,775 percent), Wal-Mart (19,807 percent), Tyson Foods (18,118 percent), Circuit City (16,410 percent), and Plenum Publishing (15,689 percent). It concluded that these companies accomplished this growth without any of the competitive advantages usually cited as being essential – advantageous positions relative to their competitors, customers or suppliers – but excelled because they were able to utilize the power of their workforce.
 - For example, compared to the U.S. airline industry, according to 1991 statistics, Southwest had fewer employees per aircraft (79 versus 131); flew more passengers per employee (2,318 versus 848); and had more available seat miles per employee (1,891,082 versus 1,339,995). It turned around some 80 percent of its flights in 15 minutes or less, while other airlines on average needed 45 minutes, giving it an enormous productivity advantage in terms of equipment utilization. It also provided an exceptional level of passenger service. Southwest won the airlines’ so-called triple crown (best on-time performance, fewest lost bags, and fewest passenger complaints – in the same month) nine times; no competitor had achieved that even once.
- A 1995 study⁹ cites the efforts of several companies to achieve their goals using a strategic human resource management approach. Examples of results cited include:
 - Komatsu (a leading heavy equipment manufacturer in Japan) devoted considerable energy to overhauling its human resource policies to ensure they reinforced the new corporate goals aimed at overtaking Caterpillar. One outcome of these efforts was a 10 percent increase in sales in just four years.
 - Focusing on the international sales element of its market, Becton Dickinson and Company (a healthcare products firm) used revised human resource management techniques to expand its international sales from 30 percent to 50 percent of total sales in six years.

⁷ Mark A. Huselid, “The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance,” *Academy of Management Journal*, Vol. 38, No. 3 (June 1995); cited in The Hay Group, “Research on the Effects of Changing the Way People are Managed,” report prepared for the 8th QRM, February 5, 1997.

⁸ J. Pfeffer, *Competitive Advantage: Creating and Sustaining Superior Performance* (New York, NY: Free Press, 1994); cited in The Hay Group, “Research on the Effects of Changing the Way People are Managed,” report prepared for the 8th QRM, February 5, 1997.

⁹ C. A. Barlett and S. Ghoshal, “Changing the Role of Top Management: Beyond Systems to People,” *Harvard Business Review* (May-June 1995), p. 137; cited in The Hay Group, “Research on the Effects of Changing the Way People are Managed,” report prepared for the 8th QRM, February 5, 1997.

- A 1993 study ¹⁰ noted that several Baldrige Award winners have emphasized strategic human resource management in improving overall quality of services and organizational performance. Among these are:
 - Cadillac Motor Division, a 1990 winner, cited a number of human resource management activities directed at warranty-related costs – the company’s primary quality measure. The 29 percent reduction in warranty costs was linked to human resource management activities.
 - IBM’s Rochester facility, a 1989 applicant, was able to link human resource management initiatives to a 50 percent reduction in the development time for new computers.
- At Holmes Regional Medical Center, a combination of personnel management, compensation and goal setting changes increased measures of patient satisfaction from the 37th percentile to the 91st percentile. The “new performance evaluation system held individuals accountable for the performance of their departments by making 35 percent of each merit increase dependent on departmental benchmarking.” ¹¹
- PIMS Associates claims that “HR strategy drives 15 percent of profit performance.” ¹²
- MacDuffie ¹³ hypothesized that “bundles” of interrelated and internally consistent human resource management practices, rather than individual practices, are the appropriate grouping for studying the link to performance. Implicit in the notion of a “bundle” is the idea that the “bundles” create the multiple, mutually reinforcing conditions that support employee motivation and skill acquisition. The more interrelated and internally consistent practices are, the greater the impact on performance. To test this theory, MacDuffie studied 62 automobile assembly plants. He constructed several bundles (each containing its own elements): buffers (a measure of flexibility of the production system), work systems (organizational structures, team environment, etc.), and human resource management policies. He correlated these bundles and the individual elements within a bundle with performance indicators of productivity and quality measures. Each of the elements within the bundles individually showed fair to strong correlation with the performance measures. But more importantly, the correlation between the bundles as a whole and the performance measures were in all cases higher (ranging

¹⁰ H. John Bernadin and Joyce E. A. Russell, *Human Resource Management: An Experiential Approach* (New York, NY: McGraw-Hill, 1993); cited in The Hay Group, “Research on the Effects of Changing the Way People are Managed,” report prepared for the 8th QRC, February 5, 1997.

¹¹ Elizabeth Sheley, “Share Your Worth: Talking Numbers with the CEO,” *HRMagazine*, Vol. 41, No. 6 (June 1996), p. 90.

¹² People Management, February 9, 1995; cited in Mary Dalmahoy, “Putting a Value on People,” *Management Accounting*, February 1996, p. 27.

¹³ John Paul MacDuffie, “Human Resource Bundles and Manufacturing Performance: Organizational Logic and Flexible Production systems in the World Auto Industry,” *Industrial and Labor Relations Review*, Vol. 48, No 2 (January 1995), p. 204.

from 0.4 to nearly 0.7) than the correlation between each individual element in the three bundles and the performance measures. This result, he argues, confirms the value of combining individual practices into bundles and the reinforcing nature of policies and practices.¹⁴

- Despite the ability to attract equal numbers of men and women as new hires, Deloitte & Touche experienced a problem retaining women long enough to be promoted to partner. The organization invested \$3 million to enhance the work environment providing such features as flexible work arrangements, company-sponsored networking, and formal career planning. Additionally, all partners and above attended a two-day workshop on “Men and Women as Colleagues.” The retention for women rose at all levels in the organization, women experienced lower turnover rates than men at senior manager level and the company also attracted more talented women.¹⁵
- Motorola employs a strong strategic approach to human resource management. Their policies and practices in different elements (namely, staffing, recruiting, training, etc.) all work together to reinforce their culture and improve performance. A sample of their results follows:
 - “One study of a Motorola business unit in the mid-1980’s indicated a greater than \$30 return-on-investment for each dollar invested in employee training and education.”¹⁶
 - “There are numerous ad hoc teams throughout the company that temporarily exist to solve specific quality problems and work with vendors. Motorola estimates that in 1994, the improvements and suggestions of the various teams resulted in over \$2 billion in documented savings for the company.”¹⁷
 - “At a Motorola cellular telephone factory in the Chicago suburbs, teams of associates helped reduce the cycle time involved in producing a telephone from 4.5 weeks to one hour and improved quality ten times.”¹⁸
 - “At still another Motorola facility, a team of empowered associates reduced production costs by \$340,000 per year.”¹⁹
 - “With respect to safety performance, Motorola officials point out that accident frequency and severity rates at most of its business units run at 50 percent of national industry averages. The company points to its active participation in the Occupational Safety and Health Administration’s Voluntary Protection Program (VPP) as a major impetus for getting every one at every level of the company to assume responsibility for the company’s safety performance.”²⁰

¹⁴ MacDuffie, pp. 211-212.

¹⁵ Gillian Flynn, “Attracting the Right Employees – and Keeping Them,” *Personnel Journal* Vol. 73, No. 12 (December 1994), pp. 48-49.

¹⁶ <http://www.fed.org.uscompanies/labor/a_m/Motoroloa.html>, February 27, 1995, January 31, 1997, p. 3.

¹⁷ <http://www.fed.org.uscompanies/labor/a_m/Motoroloa.html>, p. 3.

¹⁸ <http://www.fed.org.uscompanies/labor/a_m/Motoroloa.html>, p. 7.

¹⁹ <http://www.fed.org.uscompanies/labor/a_m/Motoroloa.html>, p. 7.

²⁰ <http://www.fed.org.uscompanies/labor/a_m/Motoroloa.html>, p. 4.

A practice in and of itself is not “best” – it is only best if it fits with the strategy, environment, task, and other context in which it is applied.

- “After initiating the six-sigma quality thrust in 1986, total productivity increased 126 percent in seven years, producing \$4.6 billion in savings. In 1993 alone, Motorola estimates that it saved over \$1.4 billion in manufacturing costs as a direct result of the quality improvements initiated since 1986.” ²¹
- “Company officials believe that this incentive program [variable pay bonus based on return on net assets] has contributed to an increased focus on making the most effective use of company assets.” ²²
- Research at 3M, Procter & Gamble, and Donnelly Mirrors, has shown that the use of innovative human resource management programs were the primary reasons for the firms’ financial successes. ²³

Best Practices

The organizations discussed below implemented some innovative ideas in the human resource management field. Each of these organizations chose best practices that met its own needs. A practice in and of itself is not “best” – it is only best if it fits with the strategy, environment, task, and other context in which it is applied. However, these following examples do show the potential impact of human resource policies and practices. Related best practice studies are discussed together below.

Compensation

Compensation is both a powerful motivator and communicator. It communicates to employees what outcomes and behaviors the organization seeks. Many different pay schemes can be used.

Profit-Sharing. These plans give each employee a piece of corporate profits (sometimes set at profits above a particular standard). The higher the profit, the higher the amount shared among the employees.

- Of the 28 managers surveyed by the National Commission on Productivity and Work Quality ²⁴ in 1975, after adopting Scanlon profit sharing plan:
 - 100 percent reported better cooperation.
 - 93 percent reported that communication improved.
 - 77 percent reported that participation increased.
- O’Dell and McAdams (1987) ²⁵ surveyed 1,598 companies of which 74 percent reported that profit sharing had a positive effect on performance, 65 percent on productivity, 70 percent on quality and 56 percent on turnover. “Almost without exception . . . profit sharing companies

²¹ <http://www.fed.org.uscompanies/labor/a_m/Motoroloa.html>, pp. 5-6.

²² <http://www.fed.org.uscompanies/labor/a_m/Motoroloa.html>, p. 6.

²³ Bernadin and Russell, p. 37.

²⁴ Martin L. Weitzman and Douglas L. Kruse, “Profit Sharing and Productivity” in *Paying for Productivity: A Look at the Evidence*, Alan S. Blinder, ed. (Washington, DC: Brookings Institution, 1990), p. 121.

²⁵ Weitzman and Kruse, p. 121.

have higher mean or median values for performance indices than non-profit sharing companies do.”²⁶

- Bell and Hanson (1987)²⁷ compared 414 United Kingdom companies from 1977-1985. For nine measures of performance, profit-sharing firms were superior in 90 percent of the cases. Before and after comparisons showed relative improvements in 7 of 9 measures.
- Howard and Dietz (1969)²⁸ compared 175 U.S. firms in 9 industries using 16 indexes of performance. Profit sharing firms were superior in 58 percent of the cases and inferior in only 19 percent.
- Metzger (1978),²⁹ examining 33 U.S. firms, found that profit-sharing firms were always superior by comparing return-on-sales and equities for 1973-1976.
- “Consistent with these five studies, a British study by Bell and Hanson (1989) found higher growth, profitability, and investor returns among 113 profit sharing companies than among 301 non-profit-sharing companies. Over the 1977-85 period, the cumulative difference in sales growth was 20.3 percent, and the difference in profit growth was 52.8 percent.”³⁰
- Based on 16 formal econometric studies on profit sharing versus productivity “the general picture that emerges from the econometric studies is that profit sharing and productivity are positively related.”³¹
- “The [Cherry Point Naval Aviation] Depot shares with all employees half of total saving resulting from productivity gains. Since the productivity gain sharing program began in 1988, the depot has realized over \$50 million in documented savings from productivity gains, half of which has been shared with employees.”³²

Broadbanding. Broadbanding is a base pay structure distinguished by multiple-pay levels or groupings that are based on an employee’s assigned role or competency level. Each pay level contains a salary range (“a broad band”) within which employees at that level may be paid. The salary any particular individual receives is based upon his or her performance and progression through the band.

- “ACA’s 1994 study, conducted by Hewitt Associates, looked at 116 organizations that had done broadbanding. The study found that broadbanding was successful in delivering greater flexibility, promoting lateral development, supporting business goals, developing skills, encouraging a team focus, and focusing employee attention away from vertical advancement.”³³

²⁶ Weitzman and Kruse, p. 123.

²⁷ Weitzman and Kruse, p. 124.

²⁸ Weitzman and Kruse, p. 124.

²⁹ Weitzman and Kruse, p. 125.

³⁰ Weitzman and Kruse, p. 126.

³¹ Weitzman and Kruse, p. 127.

³² Office of Personnel Management, “Lessons learned from high-performing Organizations in the Federal Government, (Section 2),” February 1994, <<http://www.dtic.dla.mil/c3i/bpred/5556s2.htm>>, p. 16.

³³ Brigitte W. Schay, “Broadbanding in the Federal Government: A 16-year experiment” *ACA Journal* (Autumn 1996), p. 34.

- A Navy demonstration project at China Lake, a demonstration project at the National Institute of Standards and Technology (NIST) and an Air Force demonstration project (Pacer Share) found that broadbanding did result in higher average salary costs, but these costs have been partly offset by the following benefits: ³⁴
 - “Reduced turnover of high performers. Turnover among high performers was reduced by 50 percent in the Navy demonstration labs. Between 1984 and 1992 turnover of top-rated scientists averaged 3.5 percent compared to 5.5 percent at the comparison sites.”
 - “Increased turnover of low performers. During a 10 year period, turnover of marginal and unacceptable performers ranged from 20 to 50 percent. Those who were not separated improved their performance.”
 - “Increased pay satisfaction. Satisfaction with pay was significantly higher under broadbanding and pay for performance. In the most recent survey, 60 percent of Navy employees and 56 percent of NIST employees under banding reported being satisfied with their pay. This compares to 32 percent and 42 percent respectively, under the government-wide system of grades and longevity-based step increases.”
 - “Improved organizational performance. Broadbanding and pay for performance have helped the two original Navy labs become a model for other Department of Defense research labs and have given them a competitive edge. While other research labs have been downsized or eliminated in recent years, the two demonstration labs have prospered and expanded along with their personnel systems.”

Pay for performance (Variable Pay). This pay is in addition to base pay. It is given for meeting or exceeding set goals or standards. It is not guaranteed; receipt and amount are dependent entirely upon performance.

- “In 1991 Rosenbluth initiated a pay program for the reservation agents called ‘pay for quality’ in which associates receive a monthly bonus based upon the percentage of error free reservations. The average pay for reservation agents increased 32 percent, and as a result of the program, it raised some agents’ pay to levels higher than their leader’s. The program was a financial success because costs dropped 4 percent as a result of fewer errors and lower employee turnover.” ³⁵

Performance Management Plans

Some organizations establish performance goals for their employees and units within the organizations. Performance evaluation helps track progress toward the goals.

³⁴ Schay, p.41.

³⁵ <http://www.fed.org.uscompanies/labor/n_z/Rosenbluth_International.html>, December 1994, January 31, 1997, p. 5.

- A study on 437 publicly held companies from 1990 to 1994 strongly suggests that companies that use performance management plans perform better financially than companies that don't. ³⁶ Companies with performance management plans had an average:
 - Stock-return-to-market-index ratio of 1.435 compared with 1.023 for companies without performance management plans – a difference of 40.27 percent. ³⁷
 - Price-to-book-total-capital ratio of 1.64 compared with 1.34 for companies in the same industry that were not using performance management plans – a difference of 22.39 percent. ³⁸
 - Real-value-to-cost ratio of 1.67 compared with 1.31 for companies that did not use performance management plans – a difference of 27.48 percent. ³⁹
- The system at Cherry Point Naval Aviation Depot includes on-the-spot awards by management; a Beneficial Suggestion Program awards for individual efforts toward productivity improvement; and individual and small team awards presented by the commanding officer at awards ceremonies. Over the past two years, 850 suggestions were submitted, with an approval rate of over 36 percent. Savings of \$8 million were recorded, and awards granted to individuals totaled \$190,000. ⁴⁰

Training

Training helps reinforce skills and competencies important to the organization and provides a means for the employee to improve those skills and competencies. In the past, training mainly focused on technical skills. Today, in addition to technical skills, many organizations are also training employees in “people skills” (for example, communication, team building, etc.) and total quality management statistical skills to analyze and improve their processes.

- A study concluded, based on a subjective measure, that employer-provided training raises productivity by almost 16 percent. ⁴¹
- “The estimated coefficient . . . implies that a 10-percent increase in average education in the establishment (approximately one more year of school) will lead to an 8.5 percent increase in productivity in manufacturing and a 12.7 percent increase in non-manufacturing.” ⁴²

³⁶ Helen Rheem, Briefings from the Editors, “Performance Management Programs: Do they Make a Difference?” *Harvard Business Review*, Vol. 75, No. 4 (September-October 1996), pp. 8-9.

³⁷ Rheem, pp. 8-9.

³⁸ Rheem, pp. 8-9.

³⁹ Rheem, pp. 8-9.

⁴⁰ Office of Personnel Management, “Lessons learned from high-performing Organizations in the Federal Government, (Appendix B),” February 1994, <<http://www.dtic.dla.mil/c3i/bprcd/5556ab.htm>>, February 7, 1997, p. 9.

⁴¹ Bishop (1994) cited in Sandra E. Black and Lisa M. Lynch “Human-Capital Investments and Productivity,” *Technology, Human Capital, and the Wage Structure*, Vol. 86, No. 2 (May 1996), p. 263.

⁴² Sandra E. Black and Lisa M. Lynch, “Human-Capital Investments and Productivity,” *Technology, Human Capital, and the Wage Structure*, Vol. 86, No. 2 (May 1996), p. 264.

- Bell Helicopter ran a massive training program. Results: ⁴³
 - Turnover declined to 25 percent in 1987 to 17.5 percent in 1988, then down to 3.3 percent by 1992.
 - Productivity increased by 181 percent.
 - Sales increased by 280 percent and market share has increased from 27 percent in 1988 to 37.7 percent in 1992.

The cost was \$3.6 million for the four years, but the estimated return on investment was \$2.5 million.

Job Design

The way work is divided among employees, the means (tools, etc.) used to complete work and the way employees interact with other employees is all part of job design. The traditional assembly line work was broken into small discrete tasks that would be repetitively done by one individual who would then pass the work to the next person for the next task in the process. Many jobs have changed into roles where the distinct line of responsibilities between employees is blurred and the tasks are broader and no longer discrete with well-defined boundaries.

- “The cycle time of the 20 departments with broadened jobs (jobs with responsibility for about 10 to 25 different activities in the process) were, on average, 7.4 times faster than the cycle times of departments that did not have broad jobs (jobs with fewer than 7 activities).” ⁴⁴
- “Similarly, the cycle times of the 10 departments with few job titles (departments in which about 8 or more people had the same title) were, on average, 5.8 times faster than the cycle times of departments with many titles (those in which fewer than five people had the same title.)” ⁴⁵
- “In our sample, 12 of the process-complete departments rewarded their members for meeting or exceeding unit-wide targets or standards. The cycle times of the 12 departments were, on average, 2.7 times faster than those of the department that based rewards on individual performance alone.” ⁴⁶
- “Process-complete departments with layouts that permitted people to see others’ work had cycle times 4.4 times faster than those with layouts that didn’t.” ⁴⁷

⁴³ Jennifer J. Laabs, “HR Initiatives Support Bell Helicopter’s New Plant Operations,” <<http://www.hrhq.com/members/archive/2490.html>>, January 23, 1997, p. 9.

⁴⁴ Ann Majchrzak and Qianwei Wang, “Breaking the Functional Mind-Set in Process Organizations,” *Harvard Business Review* (September-October 1996), p. 96.

⁴⁵ Majchrzak and Wang, p. 96.

⁴⁶ Majchrzak and Wang, p. 97.

⁴⁷ Majchrzak and Wang, p. 97.

Teams

Teams are becoming a more popular means of accomplishing work. Many jobs traditionally accomplished by an assembly line process have been restructured so that the group working together completes the project as opposed to each minute task being assigned to one person within the group. This allows team members to learn more skills and eliminate repetition in their jobs and allows the team to schedule work more efficiently.

- “Since 1985 when Ashton originated the team-based management structure, worker productivity has increased 60 percent and continues to rise an average of 7.5 to 8 percent per year.”⁴⁸
- “Since the introduction of the team-based system [at the AT&T Atlanta Service Center], the first-level supervisory level has been eliminated. Leaders and coordinators now perform the tasks once carried out by supervisors.”⁴⁹
- At Chrysler, additional responsibilities have been taken on by teams which eliminated formal management, both corporate and union. There are now 24 supervisors, which is approximately 1/3 of the original number.⁵⁰
- The New York Regional Office Department of Veterans Affairs reports that “[m]ature teams in the Prototype Unit (those established in May 1993) had backlogs that were 26 percent smaller, processed claims 15 percent faster, and at a 7 percent lower cost than teams that processed claims in the traditional way, despite having to spend a significant amount of time learning new skills.”⁵¹
- At Texas Instruments Defense Systems and Electronics Group, “cross-functional teams, from manager-led to self-managed . . .” caused “. . . product development times and production costs [to] decrease dramatically, while productivity soared. All of this has been accomplished with four levels of managerial hierarchy and 13,000 employees, compared to seven levels and a workforce of 25,000 people.”⁵²
- At the Cherry Point Naval Aviation Depot, “Because employees have assumed increased responsibility for their work, the depot has increased the number of employees reporting to a supervisor from about six or eight employees to 15 or more.”⁵³

⁴⁸ <http://www.fed.org/uscompanies/labor/a_m/ashton.html>, January 31, 1997, p. 4.

⁴⁹ <http://www.fed.org/uscompanies/labor/a_m/att.html>, January 31, 1997, p. 4.

⁵⁰ <http://www.fed.org/uscompanies/labor/a_m/chrysler_corporation.html>, January 31, 1997, p. 5.

⁵¹ 8th Quadrennial Review of Military Compensation, “Demonstration Projects and Pilot programs, 2nd draft,” p. 17.

⁵² Audio-Tech Business Book Summaries, Summary on *Agile Competitors and Virtual Organizations: Strategies for Enriching the Customer* by Seven L. Goldman, Roger N. Nagel and Kenneth Priess, p. 3.

⁵³ Office of Personnel Management, “Lessons learned from high-performing Organizations in the Federal Government, (Section 2),” February 1994, <<http://www.dtic.dla.mil/c3i/bprcd/5556s2.htm>>, p. 16.

- The 653d Communications-Computer Systems Group “. . . has eliminated three layers of supervision, leaving only two. All organizations below the top layer are now expected to operate as self-managed teams.”⁵⁴

Employee Involvement Practices

Some organizations are encouraging employees at lower levels in the organization to take a much more active role in how the company is run. This may include easy means to express ideas to higher level management and involvement in setting work schedules and goals.

- Huselid estimated the impact of a one standard deviation improvement in the use of high performance work practices on firm profits and market value. He found that such an increase enhanced profitability by more than \$4,000 per employee and increased market value by more than \$18,000 per employee.⁵⁵
- A 1995 survey of the Fortune 1000 firms by the Center for Effective Organizations discovered that those companies that emphasized employee involvement and total quality management had better financial rates and productivity than those companies that were low users of these practices. For example, these companies averaged return on equity of 22.8 percent and return on sales of 10.3 percent; low user companies averaged 16.6 percent and 6.3 percent respectively.⁵⁶
- Two surveys, in 1987 and 1990, on the impact of employee involvement on performance measures⁵⁷ found companies reporting positive improvements in productivity ranging from 61-69 percent, in quality ranging from 70-72 percent, in customer service ranging from 67-68 percent, in quality of life ranging from 63-68 percent, in profitability ranged from 45-47 percent, and in competitiveness ranging from 43-50 percent.
- First Tennessee National Corporation empowered work teams to set hours. “Another clerical group opted to work hours in the middle of each month to balance the overtime they put in when month-end account statements went in the mail. Turnaround time on statements was cut in half.”⁵⁸

Assessment Testing

Some organizations have begun to test prospective employees for organizational and job fit. This goes far beyond the traditional checking references and interviewing candidates. It may allow candidates to actually experience the job or may create

⁵⁴ Office of Personnel Management, “Lessons learned from high-performing Organizations in the Federal Government, (Section 2),” February 1994, <<http://www.dtic.dla.mil/c3i/bprcd/5556s2.htm>>, p. 18.

⁵⁵ The Hay Group, “Research on the Effects of Changing the Way People are Managed,” report prepared for the 8th QPMC, February 5, 1997.

⁵⁶ Edward E. Lawler III, *From the Ground Up: Six Principles for Building the New Logic Corporation* (San Francisco, CA: Jossey-Bass Publishers, 1996), p. 26.

⁵⁷ Edward E. Lawler III, Susan Albers Mohrman and Gerald E. Ledford, Jr., *Employee Involvement and Total Quality Management* (San Francisco, CA: Jossey-Bass Publishers, 1992), p. 60.

⁵⁸ Keith Hammonds, “Balancing Work and Family,” *Business Week*, September 16, 1996, p. 76.

situations to assess how the candidates react to elements associated with the job such as repetitive tasks or stress.

- ServiceMaster instituted employment screening to assess better job fit and reduced turnover rates from about 180 percent a year to about 14 percent after testing.⁵⁹ Attitudes about safety were a special concern for them also because 90 percent of workplace injuries are due to people's behavior and attitudes, rather than any sort of malfunction. By screening out candidates who ignore safety considerations, ServiceMaster enjoyed a 44 percent reduction of injuries in those employees hired by testing.⁶⁰
- Even instituting a single best practice could create major cost benefits. For example, "[b]etter screening of potential recruits, including earlier drug testing and closer reviews of medical records, could save the Defense Department millions of dollars each year, according to the General Accounting Office"⁶¹

Quality of Work Life

Demographic changes – in particular, more working women and couples – have driven a renewal of concern on how to integrate working life with home life. The time-consuming demands of both family and career often create conflict. This conflict, in turn, causes one or the other to suffer. Many organizations are finding that mitigating this conflict increases productivity, motivation, and loyalty and reduces turnover and absenteeism.

- Fel-Pro Inc. "found that workers who took advantage of family-friendly programs were more likely to participate in team problem-solving, and nearly twice as likely to suggest product or process improvements."⁶²
- "Aetna Life & Casualty Co. halved the rate of resignations among new mothers by extending its unpaid parental leave to six months, saving it \$1 million a year in hiring and training expenses."⁶³
- A 1991 survey at Chubb Group of Insurance Companies of their 7,800 U.S. employees found: 60 percent were in dual-career families; 50 percent had child or elder care responsibilities; an additional 20 percent expected these responsibilities within 3 years; and 1/3 of employees who left thought their decision would help them balance work and family lives. Substantial organization monetary and non-monetary costs were associated with this loss of employees: it costs 97 percent of salary to replace the average insurance industry employee; the average replacement cost for exempt employees is 150 percent of salary; unhappy employees are less productive and likely to be absent more often; the loss of key staff members may impede customer

⁵⁹ Flynn, p. 46.

⁶⁰ Flynn, p. 46.

⁶¹ Andrew Compart, "Tougher Recruit Screening? Changes could save the Pentagon Millions," *Air Force Times*, January 27, 1997, p. 6.

⁶² Hammonds, p. 78.

⁶³ Hammonds, p. 78.

relationships; and 47 percent of workers took off an average of eight days per year to attend to dependent-care responsibilities which equals more than \$500,000 per day. Chubb spent more than \$3 million to replace 50 exempt employees who left the company in 1992 and 1993 for child-care reasons. Chubb instituted several QOL programs such as a flexible work schedule. Productivity is up and absenteeism has decreased.⁶⁴

- “Evidence is mounting that ... loyalty [generated by work/life plans] has a tangible effect on profitability.”⁶⁵
- “Reductions in absenteeism and turnover [at Aetna Life & Casualty Co. and others] are even more manifest.”⁶⁶
- At the First Tennessee National Corporation, “Supervisors rated by their subordinates as supportive of work-family balance retained employees twice as long as the bank average and kept 7 percent more retail customers. Higher retention rates, First Tennessee says, contributed to a 55 percent profit gain over two years, to \$106 million.”⁶⁷

Ergonomics

Ergonomics is the “science that seeks to adapt work or working conditions to suit the worker.”⁶⁸ In recent years, much attention has been focused on the office environment and the worker/computer physical interaction. This attention has been caused by a rise in problems such as carpal tunnel syndrome. Many organizations have changed their working environment, often in an effort to hold down medical expenses. In some cases, additional (and perhaps unexpected) benefits such as increased productivity have also occurred.

- West Bend Mutual Insurance Company documented a 16 percent increase in productivity among more than 400 employees “. . . when it moved into a new, ergonomically correct building in 1991. Since then, carpal tunnel complaints have dropped from about 14 a year in the early 1990s to a single case last year.”⁶⁹
- “The combination of proper equipment, training and education about potential injuries has contributed to a significant drop in BNA’s costs for workers’ compensation claims related to repetitive stress injuries. In fiscal year 1991, BNA had more than 1000 employees and a dozen claims that cost \$132,000. By fiscal year 1995, 10 claims among the company’s 1,600 employees cost less than \$30,000.”⁷⁰

⁶⁴ Baxter W. Graham, “The Business Argument for Flexibility,” *HR Magazine*, Vol. 41, No. 5 (May 1996), pp. 104-110.

⁶⁵ Hammonds, p. 78.

⁶⁶ Hammonds, p. 78.

⁶⁷ Hammonds, p. 74.

⁶⁸ Webster’s New World Dictionary, 3rd College Edition, (Cleveland, OH: Webster’s New World, 1988), p. 461.

⁶⁹ Dominic Bencivenga, “The Economics of Ergonomics: Finding the Right Fit,” *HR Magazine* Vol. 41, No. 8 (August 1996), p. 71.

⁷⁰ Bencivenga, p. 70.

- “The U.S. Postal Service estimates workers’ compensation claims from carpal tunnel syndrome alone cost between \$18 million and \$29.5 million from 1992 through 1995; costs for individual cases ranged from \$13,000 to \$33,000.” A new ergonomics program implemented “. . . in its automated mail sorting sites has resulted in savings of more than \$10 million.” ⁷¹
- At the Rocky Mountain Institute, “lighting has been a factor in increasing productivity from 6 to 16 percent. ‘Each 1 percent of increased productivity is equivalent to getting rid of the entire energy bill – not just the bill for lighting – for a year.’” ⁷²
- “Pitney Bowes’ Newhard said productivity increased 10 to 15 percent in mail sorting facilities when the company placed lighting of 80 to 100 foot-candles . . . with special lens covers, directly over work-stations.” ⁷³
- By reducing expenses and improving employees’ health-related behavior, ERTL now has an annual health-care expenditure of \$2,456 per employee, compared to the regional average of \$3,600. This saves approximately \$1 million annually. ⁷⁴

Telecommuting

Telecommuting is a work option that has recently become available due to the advances in technology, particularly information technology and communications. Telecommuting is the practice of an employee doing work at home and communicating with his or her office primarily through technologies such as the Internet, modems, and cellular telephones. Most telecommuting employees will still physically go to their office, but only on a periodic basis such as once or twice a week or as necessary. Because these employees no longer need full-time space (for example, office, desk, etc.) in the organization’s building, this has led to some innovative practices involving sharing space between employees. Telecommuting has also impacted productivity and costs for the organization and lifestyle (particularly, commuting and work situation) for the employee.

- “[I]t is now possible – at this moment – to:
 - increase worker productivity by as much as 15 to 20 percent
 - cut business costs \$2 for every dollar invested in technologies
 - cut corporate real estate costs by 25 to 90 percent
 - increase free time for many workers, leading to improved family life, an increase in social, religious and volunteer activity and improved neighborhood quality” ⁷⁵

⁷¹ Bencivenga, p. 71.

⁷² Bencivenga, p. 73.

⁷³ Bencivenga, p. 73.

⁷⁴ Sheley, p. 88.

⁷⁵ “On Telecommuting: a PS Enterprises Research Paper,” <<http://www.well.com/user/pse/telecom.htm>>, January 31, 1997, p. 2.

- “[P]roductivity studies consistently find that telecommuters outperform their peers at the traditional office by about 16 percent.”⁷⁶
- “At the Antelope Valley Health net telecommuting center, productivity is 15 percent higher for telecommuters than for non-telecommuting employees.”⁷⁷
- “The City of Los Angeles found a 12.5 percent increase in productivity, for an economic impact of \$6100 per telecommuter.”⁷⁸
- “Chiat-Day a Venice based advertising agency added \$30 million in new billings since the first of 1994 while cutting its real estate holdings by 40 percent.”⁷⁹
- “AT&T in New Jersey realized 50 percent savings on real estate costs, the result of consolidating office space when AT&T sent home 35 percent of one sales force in April 1994.”⁸⁰
- An interesting tidbit for organizations that build and provide a parking garage: “the cost of an elevated parking-lot space is in the range of \$12,000 to \$20,000 per spot.”⁸¹ *Saving just three or four spaces due to telecommuting could pay the salary for one of those employees for an entire year.*

Reengineering the Human Resource Management Department

Process improvement is a means to increase efficiency or effectiveness. Though most process improvement activities are directed at production processes, it can also equally be applied to processes within the human resource management department.

- In 1991 at ERTL, Inc., recruiting firms would identify qualified candidates, sell them on a specific job, and then lose 50 percent of them when the individuals learned where the company was located. The result was an unacceptable 128-day lag between the time an exempt position became open and the day a new employee started work. A new \$100,000 recruitment video provided candidates more insight into the company and its location. ERTL is now able to fill exempt jobs in an average of 31 days. The percent of candidates dropping out due to the company’s location has fallen to 10 percent.⁸²

⁷⁶ *Training Magazine*, November 1994; cited in “On Telecommuting: a PS Enterprises Research Paper,” <<http://www.well.com/user/pse/telecom.htm>>, January 31, 1997, p. 4.

⁷⁷ “On Telecommuting: a PS Enterprises Research Paper,” p. 4.

⁷⁸ “On Telecommuting: a PS Enterprises Research Paper,” p. 4.

⁷⁹ “On Telecommuting: a PS Enterprises Research Paper,” p. 5.

⁸⁰ “On Telecommuting: a PS Enterprises Research Paper,” p. 5.

⁸¹ “On Telecommuting: a PS Enterprises Research Paper,” p. 5.

⁸² Sheley, p. 88.

Federal Government Examples

Agencies within the Federal government are also trying some of these innovative ideas. Many of these are either pilot programs or very new programs so long term (and often short term results) are not yet available. However, they provide an opportunity to gather information in the future. Those described below can be considered as examples of strategic human resource management.

Federal Aviation Administration

In 1996, the Federal Aviation Administration took the first steps toward moving from a rule-based, compliance-oriented, internally focused organization to an incentive-based, results-oriented, customer-driven organization. Some of the major changes are described below.

Reorganization. The Federal Aviation Administration delineated and reorganized into “lines of business” that have their own distinct strategies and are based on the customers they served. For example, once a cell in every sub-organization, administrative services (including human resources) became a separate line of business. Acquisition and research, air traffic services, and security did likewise.

Compensation. The Federal Aviation Administration reform has developed a compensation framework but has not yet implemented it. Generally, it proposes a core compensation system applicable throughout the Federal Aviation Administration; but it also recognizes that a core system may not meet the needs of unique “lines of business.” Therefore, it allows those lines of business to develop supplemental compensation plans. In general, the pay proposals parallel private sector trends, including competency-based pay in some lines of business.

Performance management. The Federal Aviation Administration is developing a far more structured performance management system that associates specific metrics with everything they do – a radical departure from the past. The system measures the value-added of all activities in terms of achieving the mission. In staffing, for example, this translates into reduced cycle time to fill a position as well as reduced staff hours or FTEs.

Defense Mapping Agency

In 1995, after being designated a reinvention lab, the Defense Mapping Agency (now the National Imagery and Mapping Agency) established a Reinvention Task Force. After examining their situation, they decided that the Defense Mapping Agency needed to become faster, more flexible, adaptable and accountable. In order to meet these needs, an explicit strategy of customer service was adopted.⁸³

⁸³ Material in this section is based on Defense Mapping Agency, *Application for the President's Award for Quality, 1996* (Fairfax, VA: Defense Mapping Agency, 1996).

Reorganization. Originally, the Defense Mapping Agency was organized geographically, with each regional production center operating relatively autonomously. The Defense Mapping Agency decided to shift the focus and reorganize based on “core business processes.” The result was three business units: an operations unit, an acquisition and technology unit, and an installations management unit.

Under its old structure, the Defense Mapping Agency had 11 layers of management between customer and producer. The Defense Mapping Agency also reorganized into customer service teams. By closing the gap between the customer and the producer to as few as three management layers, they achieved greater alignment with customer needs. Also, as a result of this shift to self-managed teams, the supervisor to employee ratio increased from about 1:7 to about 1:16.

Compensation. In 1992, they chartered a team to examine the compensation and reward system. They found that the system did not promote process improvement or teamwork. As a result, the Defense Mapping Agency implemented a reward system that separates cash awards from annual performance ratings and provides numerous opportunities for recognition. For example, awards are given for exceptional team and individual accomplishment, exceptional customer service, innovation and creativity and risk taking. Recently, the National Imagery and Mapping Agency has announced more changes planned for late 1998. The new ideas include a shift to a “person-based” system that focuses on broad career capabilities, as well as a simplified pay structure that focuses on skills and capabilities.

Performance Management. In addition, the Defense Mapping Agency developed a multi-dimensional performance appraisal system. The new process, being implemented now, links career competencies to core values, is automated, includes multiple raters (including the customer) and focuses on development (it is more of a feedback system than a report card. In addition, peers take part in the selection of the recipients of some of the awards.

CHAPTER 5

APPLICATION TO THE UNIFORMED SERVICES

... if similar changes in the human resource management policies and practices are employed in the department, similar impacts will result, though in different, more relevant measures of performance.

As described above, few data exist that directly bear on the value of taking a strategic approach to human resource management in the Department of Defense. However, data from outside the department give rise to the following hypothesis: if similar changes in the human resource management policies and practices are employed in the department, similar impacts will result, though in different, more relevant measures of performance. The hypothesis is not directed so much to the precise amount of the impact, but rather to the range or order of magnitude. If changes in the human resource management system result in only marginal improvements in the measures used by other organizations, then the data (even if statistically significant) provide little support for a similar change in an organization as different as the Department of Defense. However, if improvements are substantial (as the limited studies suggest they are), then pursuing a similar course seems only prudent – complemented with well designed pilot programs and demonstration projects.

The specific measures of improvement have varying degrees of applicability to the Department of Defense; on the other hand, it does not require much imagination to translate the following experiences into something more meaningful to the department: Southwest Airlines (sortie generation rates), Cadillac Motor Division (equipment maintenance), IBM and Texas Instruments (weapon system development time), and Holmes Regional Medical Center (patient satisfaction in military treatment facilities). And the impacts have considerable implications. As delineated above, studies that focus on changes to the policies and practices of the human resource management system have shown significant positive effects. One study of innovative organizations suggested that “job redesign has the potential to increase worker productivity by about nine percent; goal setting could increase productivity by about 16 percent; and pay for performance compensation systems have the potential to increase productivity by about 30 percent.”⁸⁴ If changes to the human resource management system generated these kinds of effects in the Department of Defense, assuming they were applicable to a total of 500,000 people, resulted in only a 15 percent increase in productivity and individuals cost \$40,000 on average, the workforce could be reduced by 75,000 for a total savings of \$15 billion over a period of five years and still maintain the same level of output.

⁸⁴ “Organization Loyalty is not the Answer,” *Managing Office Technology* (January 1996), p. 33.

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